

Application No. 10/667,095
Amdt. dated September 27, 2005
Reply to Office Action dated June 29, 2005

Customer No. 01933

REMARKS

Entry of this Amendment and reconsideration of this application as amended are respectfully requested.

CLAIM REJECTIONS-35 USC 101

Claims 1-17, 20 and 29 were rejected under 35 USC 101 as being drawn to non-statutory subject matter. The Examiner contended that since claim 1 included the phrase of "said container being held against the surface of the bone at a down site", it included a human within its scope and therefore was non-statutory.

Claim 1 is amended to remove the phrase relating to the manner in which the container is held against the surface of the bone.

In view of the change to claim 1, it is respectfully submitted that the Examiner's rejection of claims 1-17, 20 and 29 under 35 USC 101 has been overcome and should be removed.

CLAIM OBJECTIONS

Claims 1-17, 20 and 29 were objected to because there existed an inconsistency between the language of claim 1 and the language of claim 29 which made the scope of the claims unclear. The Examiner contended that it was unclear whether applicant was claiming the sub-combination or the combination of the "bone.

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grafter attachment unit" and required that applicant amend the language of claims 1 and 29 to be consistent with each other and clearly state which combination is being claimed.

Claim 29 is rewritten in independent form to be directed to the combination of a handpiece and a bone grafter attachment unit. It is respectfully submitted that claim 29 still reads on the elected species.

Claims 1-17 and 20 remain directed to the sub-combination of the bone grafter attachment unit.

In view of the change to claim 29, it is respectfully submitted that the inconsistency between claims 1 and 29 has been eliminated and that therefore the Examiner's objection to claims 1-17, 20 and 29 has been overcome and should be removed.

ALLOWABLE SUBJECT MATTER

The Examiner's indication of the allowability of the subject matter of claim 32 is respectfully acknowledged.

Claim 32 has been rewritten in independent form and therefore should now be allowable over the prior art of record.

CLAIM REJECTIONS-35 USC 102

Claims 1-3, 5, 8, 14, 17, 20 and 29-31 were rejected under 35 USC 102(b) as being anticipated by Fox (US 6071284).

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The Examiner's rejection is respectfully traversed on the grounds that Fox does not include all of the features of independent claims 1, 29 and 30. Each of these claims is addressed separately below.

Claim 1 is directed to a bone grafter attachment unit for removing and collecting bone fragments from a bone, using a surgical rotational handpiece. The bone grafter attachment unit comprises, inter alia, a container for receiving bone fragments and having an opening at a bottom through which said cutting member passes. The container includes an inner sleeve unit (24) having at least one peripheral opening (32) along a side and an outer sleeve (30) surrounding at least a part of the inner sleeve unit (24) (see, e.g., Fig. 2). The outer sleeve (30) is selectively fixed to the inner sleeve unit (24) such that when the outer sleeve (30) is fixed to the inner sleeve unit (24), one the peripheral openings (32) are covered by the outer sleeve (30) (see, e.g., Fig. 1).

The foregoing structure prevents bone fragments collected in the inner sleeve unit (24) from falling out through the peripheral openings (32). However, after collection of bone fragments in the inner sleeve unit (24), the outer sleeve (30) is moved relative to the inner sleeve unit (24) (upward in the illustrated embodiment to the position shown in Fig. 4) to expose

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the peripheral openings (32) and enable removal of the collected bone fragments.

Fox does not disclose, teach or suggest a collection container including at least one peripheral opening as set forth in claim 1.

Fox describes a bone collection apparatus including a collection chamber 110 having an opening at a tip 100 at one axial end, a wiper bushing 120 at an opposite axial end, a drill wiper 130 arranged in the wiper bushing 120 and a cap 140 (see Fig. 4a).

In contrast to the embodiment of the invention set forth in claim 1, the collection chamber 110 of Fox does not include both an opening at a bottom through which a cutting member passes and a peripheral opening along a side, and which is covered by an outer sleeve. The "outer sleeve" of Fox was considered by the Examiner to be element 120 and this element does not cover any peripheral opening of the collection chamber 110.

With respect to claim 29, claim 29 is directed to a system for removing and collecting bone fragments from a bone which comprises, inter alia, a bone grafter attachment unit including a rotatable drill having a shank engaged with a handpiece, a container for receiving bone fragments and a mechanism for preventing the container from separating from the drill. This

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mechanism may be a shoulder formed on the drill between the drill bit and the shank.

Fox does not disclose, teach or suggest a mechanism for preventing separation of a container from a drill.

The bone collection apparatus of Fox includes a drill bit 150 having drill flutes 170 (see Figs. 3a and 3b).

In contrast to the embodiment of the invention set forth in claim 29, there is no shoulder formed on the drill between the drill bit and shank, nor any other structure which is effective to prevent separation of the collection chamber 110 from the drill bit 150. The flute wiper 160 engages with the drill bit 150 but only cleans the drill bit 150 and does not impede its axial movement relative to the collection chamber 110. As such, there is nothing in Fox which prevents the collection chamber 110 and drill bit 150 from separating from one another.

With respect to claim 30, claim 30 is directed to a method of removing and collecting bone fragments from a donor bone site which comprises, inter alia, providing a container including an inner sleeve unit and an outer sleeve surrounding at least a part of the inner sleeve unit, operating a handpiece so as to rotate a drill and pressing the drill in a direction to cause the drill to drill into bone at the donor bone site, preventing rotation of the outer sleeve relative to the drill during rotation of the drill and non-rotatably fixing the outer sleeve to the inner

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sleeve unit to prevent any rotation of the inner sleeve unit relative to the outer sleeve while the outer sleeve surrounds the inner sleeve unit.

Fox does not disclose, teach or suggest a fixing an outer sleeve to an inner sleeve unit in the manner set forth in claim 30.

The Examiner alleges that the unit of Fox "must includes (sic) a fixing device to keep the container from rotating with the drill bit" (Office Action at page 4). However, it is respectfully submitted that Fox is devoid of any mention of a fixing device which fixes the outer sleeve (wiper bushing 120) to the inner sleeve unit (collection chamber 110) to prevent relative rotation therebetween. The presence of threads between the collection chamber 110 and the wiper bushing 120 creates a rotational fixing and does not in any way prevent rotation of the collection chamber 110 relative to the wiper bushing 120.

In view of the changes to independent claims 1, 29 and 30, it is respectfully submitted that these claims are patentable over Fox.

Claims 2, 3, 5, 8, 14, 17, 20 and 31, which depend directly or indirectly from claim 1 or claim 30, should also be patentable over Fox for the same reasons set forth above and because Fox does not disclose features of these claims.

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For example, with respect to claim 3, Fox does not disclose, teach or suggest an engagement mechanism for engaging the inner sleeve unit and the outer sleeve unit together to prevent any relative rotation therebetween. As noted above, the threads between the collection chamber 110 and the wiper bushing 120 in the Fox apparatus create a rotational fixing and do not in any way prevent rotation of the collection chamber 110 relative to the wiper bushing 120.

With respect to claim 14, Fox does not disclose, teach or suggest a rotation preventing mechanism for preventing rotation of the container upon rotation of the drill. As noted above, the Examiner states that Fox must include such a fixing device. This position is respectfully traversed in view of the absence of mention of any such fixing device or other rotation preventing mechanism in Fox.

In view of the arguments set forth above, it is respectfully submitted that the Examiner's rejection of claims 1-3, 5, 6, 8, 14, 17, 20 and 29-31 under 35 USC 102(b) as being anticipated by Fox has been overcome and should be withdrawn.

NEW CLAIMS

Claims 33-39 are added and claims 33, 34 and 36-39 read on the elected species. Claim 35 reads on the non-elected species.

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Claim 33 depends on claim 16 and recites features previously set forth in claim 16. Claim 34 depends on claim 29 and recites details of the mechanism for preventing the container from separating from the drill. Claim 35 depends on claim 23 and recites features previously set forth therein.

Claim 36 is a new independent claim directed to a bone grafter attachment unit for removing and collecting bone fragments from a bone which comprises, inter alia, a rotation preventing mechanism arranged on the container for preventing rotation of the container upon rotation of the drill. Claim 37 depends on claim 36 and recites details of this mechanism, i.e., an arm attached to the container and adapted to engage the handpiece.

The Fox reference does not disclose, teach or suggest such a rotation preventing mechanism (see the comments above with respect to claim 14).

Claim 38 is a new independent claim directed to a bone grafter attachment unit for removing and collecting bone fragments from a bone which comprises, inter alia, a container for receiving bone fragments and having an inner sleeve unit, an outer sleeve surrounding at least a part of the inner sleeve unit, and an engagement mechanism for engaging the inner sleeve unit and the outer sleeve together to prevent relative rotation

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between the inner sleeve unit and the outer sleeve while the outer sleeve surrounds the inner sleeve unit.

The Fox reference does not disclose, teach or suggest such an engagement mechanism (see the comments above with respect to claim 3).

Claim 39 is an independent claim which includes the subject matter of original claims 1 and 10. In view of the absence of a prior art rejection of claim 10, it is respectfully submitted that claim 39 is allowable over the prior art of record.

ADDITIONAL FEE

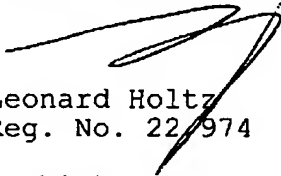
The application was originally filed with 32 claims of which 2 were independent, and the appropriate claim fee was paid for such claims. The application now contains 39 claims, of which 7 are independent. Accordingly, a form 2038 is attached hereto to cover the extra claim fee in the amount of \$575.00 (applicant claims small entity), for the addition of 7 extra claims and 4 extra independent claims. In addition, authorization is hereby given to charge any additional fees which may be determined to be required to Deposit Account No. 06-1378.

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If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,



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